

AUTOMATED SHOPPING LIST GENERATOR

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ABSTRAK

“Automated Shopping List Generator” adalah satu aplikasi yang boleh membantu semua orang terutamanya kepada suri rumah yang mahu mendapatkan barangan keperluan harian secara sistematik. Projek ini pada dasarnya menggunakan platform seperti telefon android, Telefon Windows dan android . System ini mudah digunakan digunakan, ia bukan seperti membeli-belah dalam talian kerana focus utama adalah kepada barangan keperluan yang terdapat dalam peti sejuk sahaja. Jadi, barangan tersebut tidak dijual dalam talian. System ini juga hanya boleh digunakan untuk mengemaskini keperluan makanan yang orang ramai selalu gunakan untuk memasak seperti sayur-sayuran, ikan, daging, ayam dan sebagainya. Individu yang sibuk kadang-kadang alpa dan tidak mengambil berat tentang keperluan hariannya. System ini dapat membantu mereka untuk menguruskan keperluan harian dengan bijak dan pesanan amaran akan dipaparkan pada telefon android sekiranya keperluan harian yang terdapat dalam peti sejuk sudah habis. Maklumat barangan yang sudah dibeli oleh pengguna akan disimpan dalam pangkalan data, kemudian data tersebut boleh dikongsikan kepada pengguna lain sekiranya pengguna tersebut mahu kongsi kepada pengguna lain dengan memasang sejenis applikasi dalam telefon mereka.

ABSTRACT

Automated shopping list generator is an application that can give everyone especially for housewife to get the list of their needs systematically. This project is basically use platform like android Phone, Windows Phone and android. This system is easier to used, this system is not like an online shopping because I really focused on the items that is storage in freezer only. So, the foods are cannot be sell in online shopping. This system also only can be use for update the needs that people always use in cooking, like vegetable, fish, meat, chicken and others. Busy person sometimes cannot remember and they were not concern about their needs. This system will help them to be systematically in manage their work and warning message will be displayed if the food is finished. The items that users were brought will save in database, then the data can sync to other person that they want to sharing by install some application in their phone.

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CHAPTER 1

1.1 Introduction

Shopping is an intrinsic part of activity that we are doing everyday life to search for or buying goods or services. Mostly people especially women loved shopping. It is because, the best thing when they are going shopping downtown are surely the fact that they can walk in the open and they can see monuments while going from one shop to another shop. Meanwhile generator is an apparatus that produces a vapor or gas, and also we call it as freezer. That we know, this item we use to freeze our food.

Automated shopping list generator is an application that can give everyone especially for housewife to get the list of their needs systematically. For example, the system can display the list of foods like vegetable, fruits, fish, meat, chicken, eggs, beverages and others that were stored in the generator. This system is manually used, the housewife can update the list of food that have been taken out from the generator when the food supplement is finished. In addition, the system also can display a warning message if the food is finished.

Based on my experience, women usually waste during shopping. This system will help everyone especially housewife to manage their financial problem. Besides, it also can reduce time during shopping. They will buy their needs only.

1.2 Problem Statement

Nowadays, we can see that housewife cannot prepare their needs systematically. Some of them are busy with work and failed to prepare and manage household. If they buy too much kitchen items in one time, waste will occur. By using this system, the household in the freezer will be updated automatically to android.

1.3 Objective

There are objectives for this research which is:

- i. To create a Smartphone app that keeps track of items in the fridge.
- ii. To sync with a remote database that keeps the inventory.
- iii. To trigger alert when amount of inventory is low.

1.4 Scope Of Study

The scope of this project is to use for refrigerator only by using mobile phone.

- i. Automated Shopping List Generator is manually use.
- ii. The clients are housewife, people and workers that are busy on their work.
- iii. The interface is easier to use, it will show the items that storage in freezer.

1.5 Project Significant

i. Learn ability

The interface should be easier and intuitive for all users. The amount of functionality on a mobile app should be limited to exactly what the user will need to get their goal.

ii. Efficiency

The key task on mobile app should be as efficient as possible and make sure to limit the number of clicks that it takes for user to complete task. Efficiency to make input is easy to complete [2].

iii. Memo ability

Interface that shows in the system should become easier to use. The frequency of use in a main factor when increasing memo ability, make sure always update the mobile app to make it relevant for the user.

1.6 Conclusion

In conclusion, my project is basically use platform like android Phone, Windows Phone and android. This system is not like an online shopping because I really focused on the items that storage in freezer only. So, the items are cannot be sell in online shopping. This system also only can be use for update the needs that people always use in cooking, like vegetable, fish, meat, chicken and so on. Busy person sometimes cannot remember and they were not concern about their needs. This system will help them to be systematically in manage their work and warning message will be displayed if the food is finished.

CHAPTER 2

2.0 Literature Review

In this chapter, this project will focus on the literature review which consists of information that is related with the selected projects that were developed last year [1]. It describes literature review and project methodology. There also will be explanations about project requirement which include software requirement, hardware requirement and also other requirement.

2.1 Overview

Nowadays, android phones are great gadget that helping peoples to manage our busy lives. It also helps people to doing regular things like getting groceries and shopping for home goods is no exception. The android apps and iPhone (iOS) Apps are the examples of technologies that helped people make their life become easier. Out of Milk, Shopping List and Grocery IQ are the most popular app that people always use. It have a lot of benefit and helped people in reducing wasting time during shopping. In addition, it also help ensure you don't forget anything especially for busy peoples [4].

2.2 Existing system review

There are two types of technology that use in app applications:-

- i. Android Apps
- ii. iPhone (iOS) Apps

Android Apps

There is selected two most popular free shopping list apps available on Google PlayStore and evaluated them based on their principles and guidelines in the previous section. The apps are “Out of Milk” and “Shopping List” and the evaluation results are listed below.

a.) Out of Milk

“Another brightly-colour Android shopping list app, Out of Milk (free) is a little feature-sparse app. It allows adding items to shopping list by scanning the barcode, as well as text/voice entry. It can also share lists via text, email, and others but there are no syncing features. This app also features a to-do list, and a pantry section, to keep track of items already have in stock, but this means one has to keep that updated when one uses items, it does allow to move them to a shopping list from the pantry section”[1].



Figure 2.1: Demonstration to use Out of Milk application.



Figure 2.2: Demonstration to use Out of Milk application.



Figure 2.3: The output of Out of Milk application.

Table 2.1: The criteria Out of Milk android application.

Criteria	Out of Milk
Title of App	This application is not general in shopping.
Functionality	All other existing features are work properly and also the barcode reader and voice recognition work properly.
Navigation	The couple of screens and navigation is easy to use. But different if want to coming back to the main screen is rather tedious.
Collaboration & Connectedness	It can share via text, email, but not in syncing. The pro version had sync feature
Consistency of UI elements	Out of Milk is very clean and consistent UI, the global design layout.
Physicality & Realism	In term UI design, it is not similar to real work.

Graphics	The graphics is minimal and very neat. The design is appealing and beautiful app icon.
Orientation Changes	Good on multiple devices, but not handle orientation changes very well. The auto rotate feature is does not work and designed for vertical layout.
Intuitiveness	It is easy to use and very intuitive.
Gesture support	The gesture support is touch based app. It supports very well and voice support is also good.
Tutorials/ Help	This application provides simple tutorial at the start of the app for the first time.
Interactivity	The interactivity is quick to response and engages user.
Recovery from Failure	Gracefully in handles failure. It auto saves lists if app it is closed or phone switched off.
Advertisements	There are no advertisements in the free and Pro version. That's why it very popular as user's attention is not distracted.

b.) Shopping List

“The not very catchy titled app. Shopping List is another free shopping list app for Android that allows the user to share lists with BlackBerry and iPhones. This In terms of functionality, there is no specific recipe section, but it does feature reminders and a store directory, which allows user to phone stores directly from the app, although this is presumably intended for something a little more specialized than phoning one's local supermarket to see if they have any bread. This app doesn't allow list ordering, but it does have a built-in list of aisles (which one can add to or edit),

allowing categorizing the items and one can enter quantities and notes for each item, so there is no need to create a separate entry every time one needs a different quantity of an item. Below is the analysis in a tabular form”.

App Screenshots



Figure 2.4: Example of Shopping List android application.

Table 2.2: The criteria Shopping List android application.

Criteria	Shopping List
Title of App	Shopping List very pertinent to the task and not catchy.
Functionality of existing features	The voice recognition feature does not work properly. Barcode feature requires installing a separate barcode reader app.
Navigation	The navigation is very few screens, swift and clear navigation.
Collaboration &	Does not support the collaboration and connectedness.

Connectedness	
Consistency of UI elements	The consistency of UI elements is very good design and global layout.
Physicality & Realism	Physicality and realism is very pertinent to a real world notepad as the design. The layout is similar to a diary or notepad.
Graphics	The graphic is releasing to eye and very simple. It also no cluttering.
Orientation Changes	Handles very quickly, works with auto-rotate
Intuitiveness	Intuitive for the simple features, but exploring is needed for advanced features
Gesture support	Gesture is good but voice support is poor.
Tutorials/ Help	It available online and not on launch of app
Interactivity	The interactivity is very good, but it lacks deleted item go to bottom of list feature which would have made it more interactive.
Recovery from Failure	Gracefully in handles failure. It auto saves lists if app is closed or phone is switched off.
Advertisements	The advertisements in the free version are a distraction.

i. iPhone (iOS) Apps

In this categories ,the Shopping List and Grocery IQ was chosen for two popular shopping list applications that are available for the iOS platform and evaluated them against the guidelines: Grocery IQ and Shopping List.

a.) Shopping List

Shopping List application consists of auto complete mechanism and a predetermined list of items which users can choose. Shopping list is an application that helps user to organize, share and manage their shopping lists using their phone. By using Shopping list, users are easily add new items you need to buy, set quantity, and pick a category. When organizing the products, users can add prices, pictures and barcodes to items that's need to buy [1].

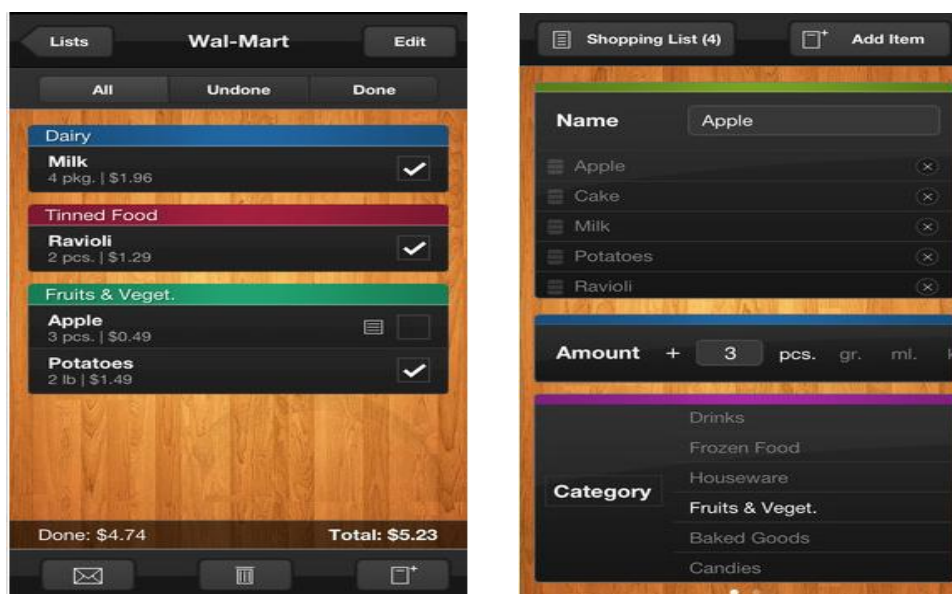


Figure 2.5: Example of Shopping List application.

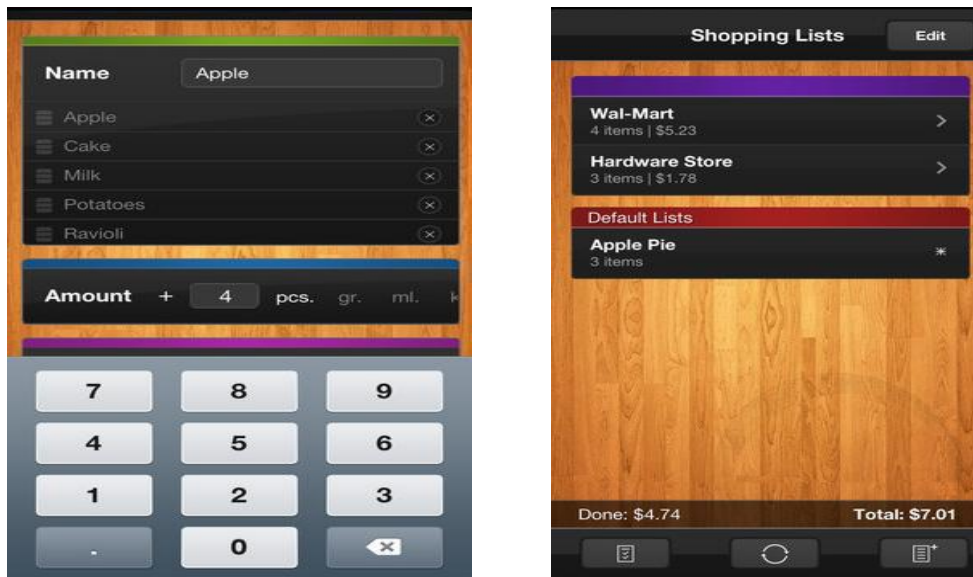


Figure 2.6: Example of Shopping List application.

Table 2.3: The criteria Shopping List iphone application.

Criteria	Shopping List
Title of App	Shopping List is very pertinent to the task yet not catchy.
Functionality of existing features	The functionality of existing features is well. Adding items is either via typing in full or choose from a predetermined list. It could help if there is an auto complete feature while typing and it could allow addition into the database of predetermined items.
Navigation	The navigation is not much of a problem. The deletion of items on touching added items is a bit deceiving. The pro version has excellent navigation and grouping of items.
Collaboration & Connectedness	It free version of the application that does not allow collaboration while the premium version does but only allows sharing via email.

Consistency of UI elements	The UI elements in the free version are inconsistent and the pro version does a good job with consistency of items.
Physicality & Realism	It is very pertinent to real world planner as the design and layout are very good.
Graphics	The pro version has good graphics and the background wood panelling, subtle colours and intuitive menu are all worth trying out.
Orientation Changes	The orientation changes can be locked or unlocked as this sometimes is a negative factor.
Intuitiveness	The pro version is highly intuitive with its automatic grouping of items in various lists.
Gesture support	None gesture support. The OS could possibly be blamed for this as there is no support for gestures in the iOS.
Tutorials or Help	The website has a good in manual and FAQ section.
Interactivity	The interface is good to interact and the navigation is precise.
Recovery from Failure	It saves list items automatically and the fetches they while coming back from an app crash.
Advertisements	The free version is relatively void of the advertisements, but asks to buy the pro version on various clicks.

b.) Grocery IQ

Groceries are a gorgeous shopping list app that's method of organization that's one of the most intuitive. Create as many lists as peoples like, sort items quickly by type, swipe to check things off. User don't even have to classify items either, Groceries handles all that for user and even auto-completes items that user typing as their enter for faster entry. The main list view shows a percentage complete as well for a quick overview. If user need to share lists, that is no problem. Groceries lets user do that too [1].

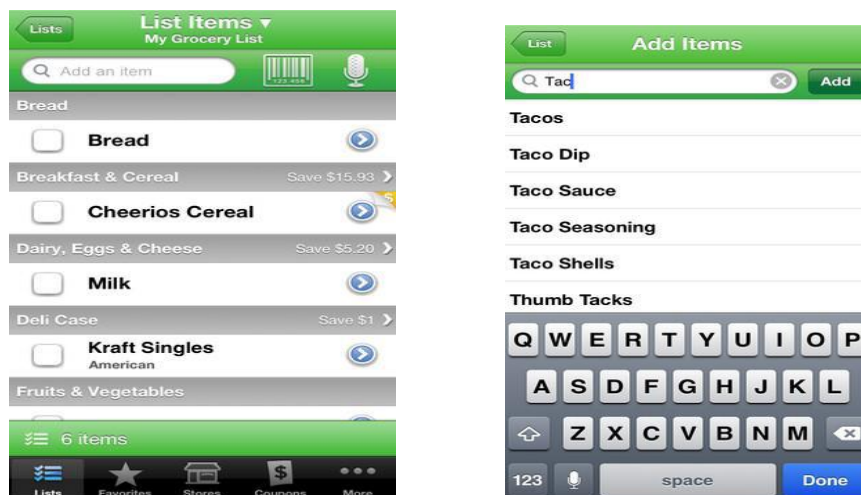


Figure 2.7: Example of Grocery IQ application.

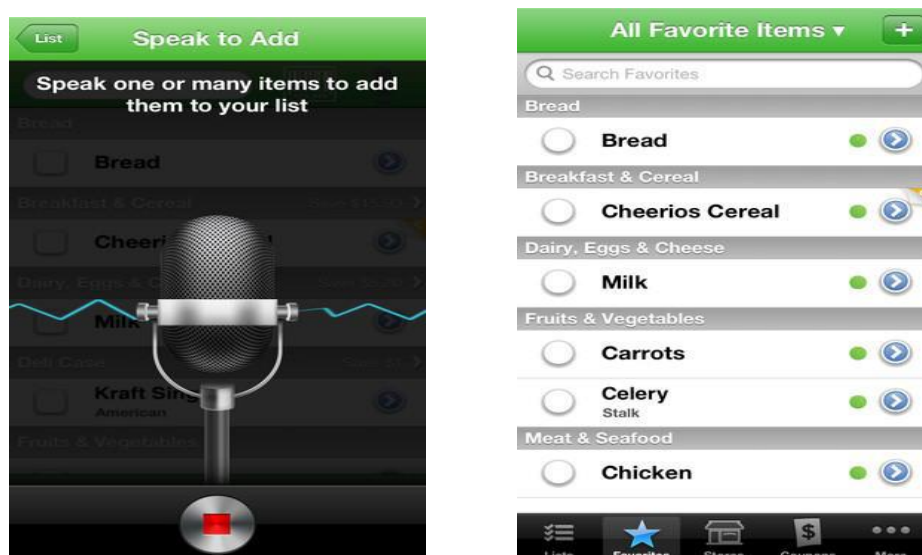


Figure 2.8: Example of Grocery IQ application.

Table 2.4: The criteria Grocery IQ iphone application.

Criteria	Grocery IQ
Title of App	The sound is good and conveys it has an IQ over grocery but does much more than that.
Functionality of existing features	Functionality of existing features is really well. The adding items are either via typing in full or choose from a predetermined list. There is also an auto complete feature based on items already added. The voice based actions is yet another good feature.
Navigation	The navigation across the application is very consistent and it has all items that is most familiar places so that finding them is never a problem.
Collaboration & Connectedness	It allows syncing across devices and platforms using a personalized account.
Consistency of UI elements	All the elements are placed where they are needed to be and convey what they have to.
Physicality & Realism	Physicality & Realism looks very familiar and easy to use.
Graphics	The main advantage of this app is its graphics. The best that any free application can provide.
Orientation Changes	The orientation changes can be locked or unlocked as this sometimes is a negative factor.

Intuitiveness	The whole application is very intuitive with its auto complete. The bar code and voice based addition of items.
Gesture support	None gesture support.
Tutorials or Help	The Grocery IQ website has good manual and FAQ section
Interactivity	The interface is good to interact with user and the navigation is precise.
Recovery from Failure	It saves list items automatically and fetches them while coming back from an app crash.
Advertisements	The free version is completely void of advertisements.

2.3 Discussion of comparison between Existing system and Automated Shopping List Generator.

Based on the previous system that is related with my system, there are have pro and cons in developed their system. But i want to shows that Automated Shopping List Generator have criteria that suitable to use nowadays, and it is more better than previous system.

Comparison between existing system and Automated Shopping List Generator:

Table 2.5: Comparison between existing system and Automated Shopping List Generator.

EXISTING SYSTEM (APP)	EXISTING SYSTEM (FUNCTIONALITY)	AUTOMATED SHOPPING LIST GENERATOR (FUNCTIONALITY)
Out of Milk (Android Apps)	a.) Not general use in shopping. b.) Share via text, email but no syncing. c.) Minimal in graphic. d.) Good on multiple devices but not handle orientation changes very well and auto rotate feature does not work. e.)	a.) The smart phone app can keeps track of items in the fridge b.) Using remote database that keeps the inventory. c.) The reminder is used when amount of inventory is low. d.) Allows syncing across devices. e.) The interface is good interacting with user. f.) Support collaboration & connectedness.
Shopping List (Android Apps)	a.) Does not support collaboration & connectedness. b.) Lacks deleted item go to bottom of list feature which would have made it more interactive.	
Shopping List (iPhone (iOS) Apps)	a.) The free version of the application does not allow collaboration while the premium version does but	